KNOWLEDGE MANAGEMENT POLICIES AND PRACTICES – A STUDY WITH REFERENCE TO COMPUTER SOFTWARE AND SERVICES COMPANIES IN KARNATAKA

1. INTRODUCTION

In a knowledge based global economy, companies will have to come to terms with the ground realities as markets shift, uncertainty dominates, technologies proliferate, customer preferences change in an unprecedented manner, and products and services become obsolete faster than ever before. Successful organizations increasingly focus on product innovation, cost containment, competitive pricing, creative advertising, financial prudence, rapid response to market intelligence information, attracting and retaining talented workforce, building and sustaining corporate reputation, more efficient and effective supply chain management, highly innovative customer relationship management, and successfully meeting corporate social and environmental responsibilities.

The new economic and business environment characterized by worldwide competition has influenced the Indian corporate sector in three profound ways. First, progressive organizations must achieve higher standard of productivity, quality and effectiveness in order to survive, grow and excel in the new environment. Second, companies must adapt or change their business strategies to take into new realities of intense global and domestic competition. Finally, corporate cultures, many of which were formed in a regulated or monopolistic environment during the pre-liberalization era must be retooled for the challenges of competitive environment. It is imperative in the context of new business realities that organizations should be able to continuously innovate, be customer-focused and remain cost-competitive in order to stay successfully in the field of business.

Knowledge Management involves, among others, the identification and mapping of intellectual assets within an organization. This basically means identifying who knows what within the company. When viewed from this perspective, knowledge management can be considered as a process of performing an audit of intellectual assets focusing on the organization's unique resources and their crucial functions. Through this audit process intelligence, value and flexibility are added to the identified intellectual assets. Knowledge

management is essentially about getting the right knowledge to the right person at the right time. This in itself may not seem so complex, but it implies a strong tie to corporate strategy, understanding of where and in what forms knowledge exists, creating processes that span organizational functions, and ensuring that initiatives are accepted and supported by organizational members. Efficiently used knowledge is not only an important intellectual asset, but also a useful tool for organizations to effectively compete in the increased levels of market competition **(Carneiro, 2000; Alavi & Leidner, 2001).** According to **Drucker (1995, p. 271)**, knowledge has become the key economic resource and the dominant-and perhaps even the only-source of competitive advantage. Organizations can enhance the generation of new ideas and/or knowledge, knowledge availability, application of the existing knowledge and communication within knowledge-workers by effectively managing the knowledge **(Plessis, 2007; Carneiro, 2000; Huang & Li, 2009; Lin &Lee, 2005; Alavi & Leidner, 2001; Nonaka & Takeuchi, 1995; Beijerse, 1999).**

2. CONCEPTUAL FRAMEWORK

Strategic Human Resource Management

According to **Walton (1999)** "strategic human resource development involves introducing, eliminating, modifying directing and guiding processes in such a way that all individuals and teams are equipped with the skills, knowledge and competences they require to undertake current and future tasks required by organizations".

Definition of Knowledge Management

There are as many definitions for knowledge management as there are people who are working on this subject. Given below, are some of the most commonly used definitions:

Knowledge management is knowledge creation followed by interpretation, knowledge dissemination and use, and knowledge retention and refinement - **De Jarnett (1996)**

Powerful environmental forces are reshaping the world of the manager of the 21st century. These forces call for a fundamental shift in organisation process and human resource strategy. This is knowledge management –**Taylor (1996)**

Knowledge management is the process of critically managing knowledge to meet existing needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities **- Quintas (1997)**

Knowledge management is the activity, which is concerned with strategy and tactics to manage human centred assets **- Brooking (1999)**

"Knowledge management is about enhancing the use of organisational knowledge through sound practices of information management and organisational learning."- **Broadbent (1998)**

"A learning organization ... is proficient at creating, acquiring, organizing, and sharing knowledge, and at applying this knowledge to develop its behaviour, position, or objectives. [The essential goal of knowledge management is] ... to harness the organization's information resources and information capabilities to enable it to learn and adapt to its changing environment." **- Choo (1998)**

"The ultimate corporate resource has become information - the ultimate competitive advantage is the ability to use it - the sum of the two is knowledge management."- **Oxbrow& Abell (1998)**

'Explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organising, diffusion, use and exploitation of organisational objectives'– **David Skyrme (2002)**

KM is managing the corporation's knowledge through a systematically and organizationally specified process for acquiring, organizing, sustaining, applying, sharing and renewing both the tacit and explicit knowledge of employees to enhance organizational performance and create value.- **Davenport & Prusak (2000)**

KM as policies, procedures and technologies employed for operating a continuously updated linked pair of networked database **- Anthes (1991)**

Knowledge Management is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical and strategic requirements; it

consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge. It is important to remember that knowledge management is not about managing knowledge for knowledge's sake. The overall objective is to create value and to leverage, improve, and refine the firm's competences and knowledge assets to meet organizational goals and targets.

Several Dimensions of Knowledge Management:

Implementing knowledge management thus has several dimensions including (see Figure1); KM Strategy (knowledge management), Organizational Culture, Organizational Processes, Management and Leadership, Technology and Politics.

Figure 1. Dimensions of Knowledge Management

Source: Alan Frost 2014, Synthesis of Knowledge Management Failure Factor, www.knowledge-management-tools.net

- **KM Strategy:** Knowledge management strategy must be dependent on corporate strategy. The objective is to manage, share, and create relevant knowledge assets that will help meet tactical and strategic requirements.
- **Organizational Culture:** The organizational culture influences the way people interact, the context within which knowledge is created, the resistance they will have towards certain changes, and ultimately the way they share (or the way they do not share) knowledge.
- **Organizational Processes:** The right processes, environments, and systems that enable KM to be implemented in the organization.
- **Management and Leadership:** KM (knowledge management) requires competent and experienced leadership at all levels. There are a wide variety of KM related roles that an

organization may or may not need to implement, including a CKO (chief knowledge officers), knowledge managers, and knowledge brokers.

- **Technology:** The systems, tools, and technologies that fit the organization's requirements properly designed and implemented.

- **Politics:** The long-term support to implement and sustain initiatives that involve virtually all organizational functions, which may be costly to implement (both from the perspective of time and money) and which often do not have a directly visible return on investment.

Roots of Knowledge Management

Knowledge Management consist of different roots (see Figure 2).

Learning organization: If an organisation conforms to the required norms and can be termed as a learning organisation, then it becomes one of the starting point of knowledge management.

Intellectual assets: The intellectual assets in an organisation are in the people who have gained expertise through years of work experience and are tacit in nature. This knowledge has to be made explicit and managed in order to leverage on it and gain competitive advantage.

Knowledge based systems: The systems that are evolved in an organization to facilitate the smooth functioning of the organization should facilitate harnessing the existing knowledge in the organization. These systems could be a basis for knowledge management.

Information Management: Information is the core of knowledge management, since information combined with experience and intuition leads to knowledge. Hence, proper information management systems can result in an effective knowledge management system.

Innovation: Creativity and innovation are methods by which new knowledge is created. Innovation comes out of increment changes to existing products or processes and a radical change, which is different from the original process or product. Radical changes give a new dimension to the existing knowledge base and incremental changes result in changes in perceptions and line of thinking leading to new knowledge insights.

Business transformation: Business transformation acts as another catalyst for knowledge management. Organisations respond to the various changes in the market place through transformation processes like business process re-engineering.

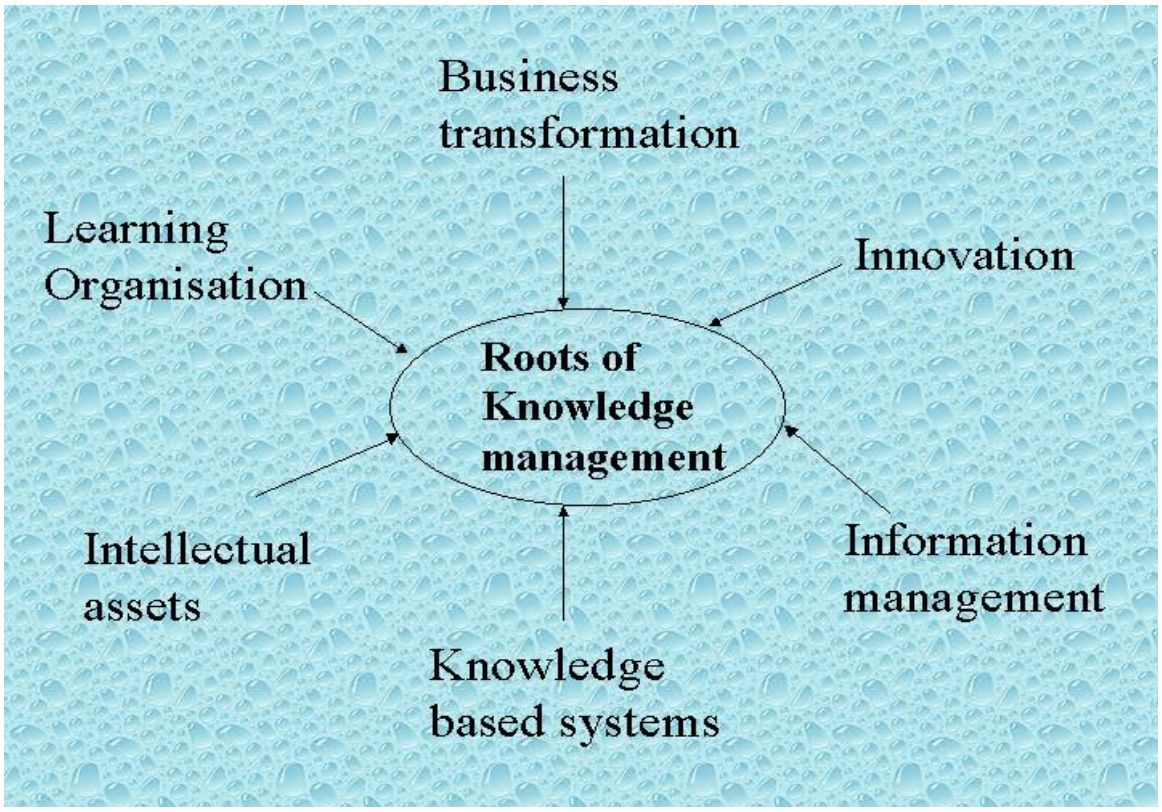

Figure 2. Roots of Knowledge Management

Source: R Suresh, Knowledge management – An Overview, Research Article.

Concept of Knowledge, Information and Data

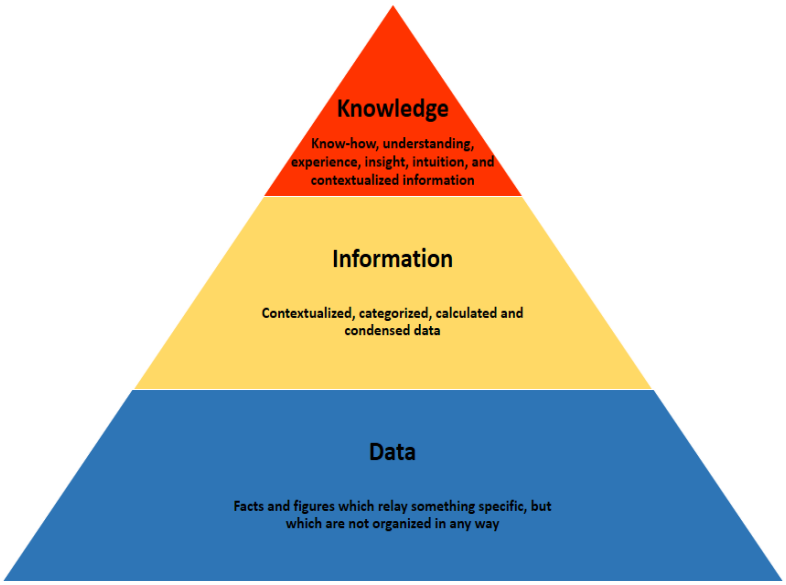
Knowledge
Know-how, understanding, experience, insight, intuition, and contextualized information
Information
Contextualized, categorized, calculated and condensed data
Data
Facts and figures which relay something specific, but which are not organized in any way

Figure 3. Concept of knowledge, information and data

Source: Alan Frost 2014, Synthesis of Knowledge Management Failure Factor, www.knowledge-management-tools.net

Data: Facts and figures which relay something specific, but which are not organized in any way and which provide no further information regarding patterns, context, etc. According to **Thierauf (1999)** data means "unstructured facts and figures that have the least impact on the typical manager."

Information: For data to become information, it must be contextualized, categorized, calculated and condensed **(Davenport & Prusak, 2000)**. Information thus paints a bigger picture; it is data with relevance and purpose **(Bali *et al*, 2009).** It may convey a trend in the environment, or perhaps indicate a pattern of sales for a given period of time. Essentially information is found "in answers to questions that begin with such words as who, what, where, when, and how many" **(Ackoff 1999).**

Knowledge: Knowledge is closely linked to doing and implies know-how and understanding. The knowledge possessed by each individual is a product of his/her experience, and encompasses the norms by which he/she evaluates new inputs from his/her surroundings **(Davenport &Prusak 2000). Gamble and Blackwell (2001)** based closely on a previous definition by **Davenport & Prusak:** "Knowledge is a fluid mix of framed experience, values, contextual information, expert insight, and grounded intuition that provides an environment

and framework for evaluating and incorporating new experiences and information. It originates and is applied in the mind of the knowers. In organizations it often becomes embedded not only in documents or repositories, but also in organizational routines, practices and norms."

Wisdom: Wisdom is the knowledge with deep insight. Wisdom supported by core knowledge ensures smart application of knowledge in problem solving. It extracts more value out of knowledge. Knowledge with insight (wisdom) makes it easier to decide 'where and where not' it should be used. Wisdom is the accumulated experience and learning from knowledge application while solving the problems.

Types of Knowledge:

Two types of knowledge are usually defined, namely explicit and tacit knowledge**.**(see Figure 4.)

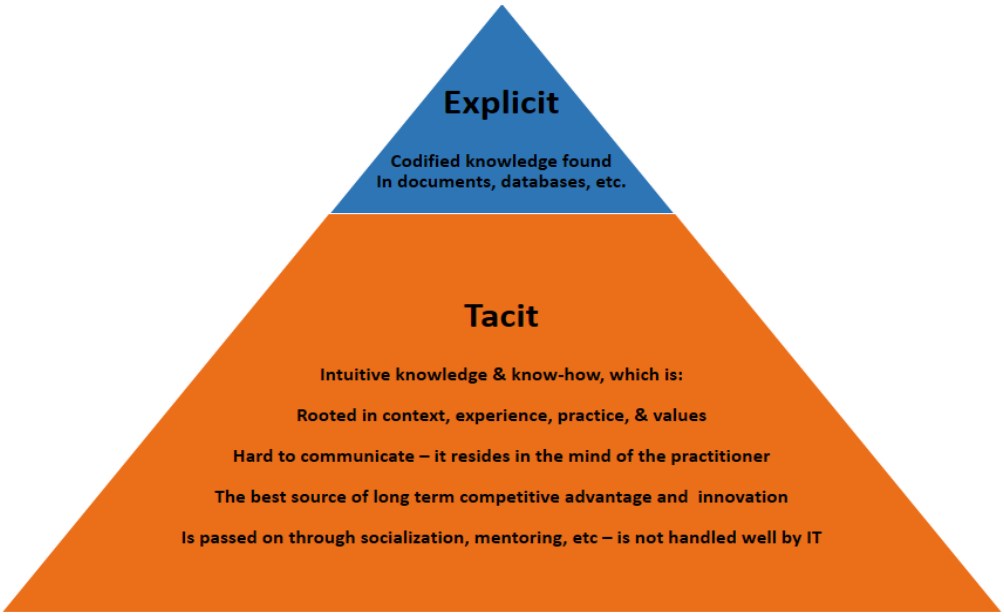
Explicit
Codified knowledge found
In documents, databases, etc.
Tacit
Intuitive knowledge & know-how, which is:
Rooted in context, experience, practice, & values
Hard to communicate – it resides in the mind of the practitioner
The best source of long term competitive advantage and innovation
Is passed on through socialization, mentoring, etc – is not handled well by IT

Figure 4. Types of Knowledge

Source: Alan Frost 2014, Synthesis of Knowledge Management Failure Factor, www.knowledge-management-tools.net

Explicit Knowledge

This type of knowledge is formalized and codified, and is sometimes referred to as know-what **(Brown & Duguid, 1998).** It is therefore fairly easy to identify, store, and retrieve **(Wellman 2009).** This is the type of knowledge most easily handled by knowledge management system (KMS), which are very effective at facilitating the storage, retrieval, and modification of documents and texts.

Tacit Knowledge

This type of knowledge was originally defined by **Polanyi in 1966**. It is sometimes referred to as know-how **(Brown & Duguid, 1998)** and refers to intuitive, hard to define knowledge that is largely experience based. Because of this, tacit knowledge is often context dependent and personal in nature. It is hard to communicate and deeply rooted in action, commitment, and involvement **(Nonaka, 1994).**

Knowledge Management Processes:

- Knowledge Discovery and Detection
- Knowledge Organization and Assessment
- Knowledge Sharing
- Knowledge Reuse
- Knowledge Creation
- Knowledge Acquisition

Knowledge Discovery and Detection

This step deals with discovering the knowledge that a firm possesses all over the organization, as well as the patterns in the information available that hide previously undetected pockets of knowledge. Once knowledge is created, it exists within the organization. However, before it can be reused or shared it must be properly recognized and categorized. It can be classified into following sub sections:

1. **Explicit Knowledge:** This is largely a process of sorting through documents and other records, as well as discovering knowledge within existing data and knowledge repositories. For the latter, IT can be used to uncover hidden knowledge by looking at patterns and relationships within data and text. The main tools/practices in this case include intelligence gathering, data mining (finding patterns in large bodies of data and information) and text mining (text analysis to search for knowledge, insights, etc.).

Intelligence gathering is closely linked to expert systems **(Bali *et al*, 2009)** where the system tries to capture the knowledge of an expert, though the extent to which they are competent for this task is questionable **(Botha *et al*, 2008).**

2. **Tacit knowledge:** Discovering and detecting tacit knowledge is a lot more complex and often it is up to the management in each firm to gain an understanding of what their company's experts actually know. Since tacit knowledge is considered as the most valuable in relation to sustained competitive advantage, this is a crucial step, a step that often simply involves observation and awareness. There are several qualitative and quantitative tools/practices that can help in the process; these include knowledge surveys, questionnaires, individual interviews, group interviews, focus groups, network analysis, and observation. IT can be used to help identify experts and communities. Groupware systems and other social/professional networks as well as expert finders can point to people who are considered experts, and may also give an indication of the knowledge these people/groups possess.
3. **Embedded knowledge:** This implies an examination and identification of the knowledge trapped inside organizational routines, processes, products etc, which has not already been made explicit. Management must essentially ask "why do we do something a certain way?" This type of knowledge discovery involves observation and analysis, and the use of reverse engineering and modelling tools.

Knowledge Organization and Assessment

The idea that firms should categorize their knowledge assets is not a new one **(Horvath 2000, Bukowitz & Williams, 1999)**. In order to determine what resources they have at their disposal and to pin point strengths and weaknesses, management needs to organize the knowledge into something manageable. Knowledge organization involves activities that "classify, map, index, and categorize knowledge for navigation, storage, and retrieval" **(Botha *et al*, 2008).** Markus (2001) assigns the role of preparing, sanitizing, and organizing this knowledge to a "knowledge intermediary". This may be a knowledge manager or it may also be the actual producer of the knowledge. The point is, that in order for knowledge to be shared (either for reuse in a business situation or as a tool for knowledge creation), it must be prepared in such a way that it can be identified, retrieved, and understood by the knowledge user.

Knowledge Sharing

Knowledge Management is fundamentally about making the right knowledge or the right knowledge sources (including people) available to the right people at the right time. Knowledge sharing is therefore perhaps the single most important aspect in this process, since the vast majority of KM initiatives depend upon it. Knowledge sharing can be described as either push or pull. The latter is when the knowledge worker actively seeks out knowledge sources (e.g. library search, seeking out an expert, collaborating with a co-worker etc.), while knowledge push is when knowledge is "pushed onto" the user (e.g. newsletters, unsolicited publications).

Knowledge Reuse

Markus (2001) identifies three roles in the reuse of knowledge:

- Knowledge producer: The original creator of the knowledge
- Knowledge intermediary: The one who packages and prepares the knowledge so that it may be stored, retrieved, and shared. This may involve any number of functions such as indexing, categorization, standardizing, publishing, mapping, etc.
- Knowledge consumer: The person who is the recipient and user of the knowledge in question.

Fruchter and Demian (2002) identify two very general types of knowledge reuse: Internal: Where the knowledge producer uses her own knowledge at some future point. External: Where the knowledge consumer uses someone else's knowledge.

Knowledge Creation

Knowledge creation according to the **Nonaka's SECI model** is about continuous transfer, combination, and conversion of the different types of knowledge, as users practise interact, and learn. **Cook and Brown (1999)** distinguish between knowledge and knowing, and suggest that knowledge creation is a product of the interplay between them. The shift in condition between the possession of knowledge and the act of knowing - something that comes about through practice, action and interaction- is the driving force in the creation of new knowledge. Furthermore, in order for this interplay to be most fruitful, it is important to support unstructured work environments in areas where creativity and innovation are important.

Knowledge Acquisition

Knowledge acquisition refers to the knowledge that a firm can try to obtain from external sources. External knowledge sources are important and one should therefore take a holistic view of the value chain **(Gamble & Blackwell 2001).** Sources include suppliers, competitors, partners/alliances, customers, and external experts. Communities of practice can extend well outside the firm.

KNOWLEDGE MANAGEMENT CONVESION PROCESSES

At the heart of Nonaka's work is the premise that there are two types of knowledge: tacit and explicit. Tacit knowledge is subjective and experience based knowledge that cannot be expressed in words, sentences, numbers or formulas, often because it is context specific. This also includes cognitive skills such as beliefs, images, intuition and mental models as well as technical skills such as craft and know-how. Explicit knowledge is objective and rational knowledge that can be expressed in words, sentences, numbers or formulas (context free). It includes theoretical approaches, problem solving, manuals and databases. Nonaka models knowledge transfer as a spiral process. Start with a 2x2 matrix, in which existing knowledge can be in either form - tacit or explicit - and the objective of knowledge transfer can be to convey either tacit or explicit knowledge. Each mode of transfer operates differently:

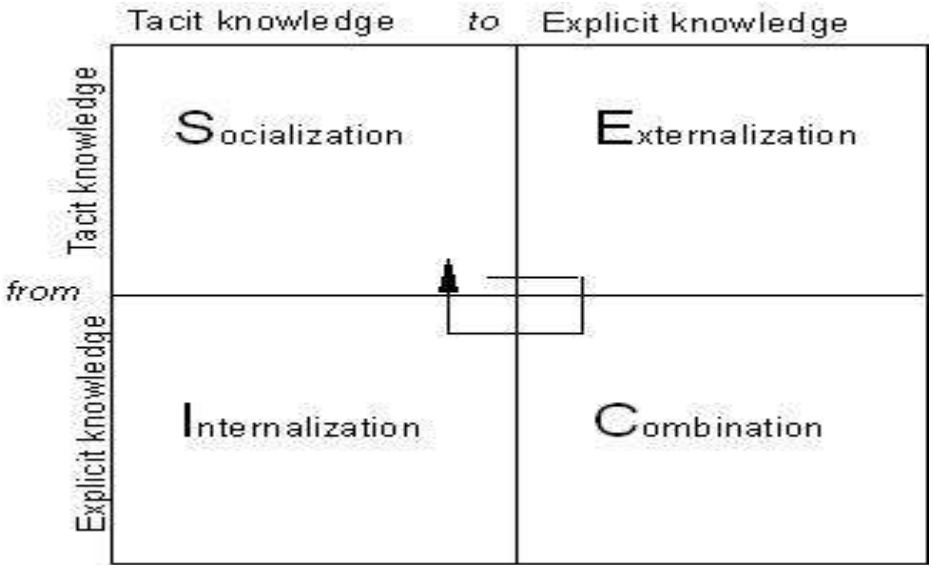

Figure 5: The 'engine' of knowledge creation

Source: Nonaka & Takeuchi 1995, pp. 57, 62, and 71.

Each type of knowledge can be converted. When viewed as a continuous learning process, the model becomes a clockwise spiral; organizational learning depends on initiating and sustaining the learning spiral. (The model is a spiral, not a cycle, because as one "learns" around the cycle, understanding moves to deeper and deeper levels.)

The process that transfers tacit knowledge in one person to tacit knowledge in another person is ***socialization***. It is experiential, active and a "living thing," involving capturing knowledge by walking around and through direct interaction with customers and suppliers outside the organization and people inside the organization. This depends on having shared experience, and results in acquired skills and common mental models. Socialization is primarily a process between individuals.

The process for making tacit knowledge explicit is ***externalization***. One case is the *articulation* of one's own tacit knowledge - ideas or images in words, metaphors, analogies. A second case is *eliciting and translating* the tacit knowledge of others - customer, experts for example - into a readily understandable form, e.g., explicit knowledge. Dialogue is an important means for both. During such face-to-face communication people share beliefs and learn how to better articulate their thinking, though instantaneous feedback and the simultaneous exchange of ideas. Externalization is a process among individuals within a group.

Once knowledge is explicit, it can be transferred as explicit knowledge through a process Nonaka calls ***combination***. This is the area where information technology is most helpful, because explicit knowledge can be conveyed in documents, email, data bases, as well as through meetings and briefings. The key steps collecting relevant internal and external knowledge, dissemination, and editing/processing to make it more usable. Combination allows knowledge transfer among groups across organizations.

Internalization is the process of understanding and absorbing explicit knowledge in to tacit knowledge held by the individual. Knowledge in the tacit form is actionable by the owner. Internalization is largely experiential, in order to actualize concepts and methods, either through the actual doing or through simulations. The internalization process transfers organization and group explicit knowledge to the individual.

The Overall Conceptual Framework

As shown in the figure 6, current study **"Knowledge Management Policies and Practices – a study with reference to Computer Software and Services Companies in Karnataka"** will focus on how Knowledge management policies and practices of Computer Software and Services Companies in Karnataka are determined. The Organizational characteristics of industrial units such as **ownership patterns, nature of the main activity, industry category, age, workforce size, ISO accreditation status, life cycles stages, complexity, and culture and climate** along with knowledge resources like **data, information, knowledge, wisdom and documented organizational experiences** through the knowledge management process **(knowledge acquisition, knowledge creation, knowledge assessment, knowledge sharing, knowledge discovery and detection, and knowledge reuse)** determine knowledge management output generated by the organization. Knowledge management output thereby results in better products, improved customer service, better cost control and better financials and knowledge management practices of the organization, in turn, make it possible to achieve improved organizational effectiveness, customer satisfaction, sustainable competitive advantage and enhancement of creativity and innovation.

3. REVIEW OF LITERATURE

A critical review of literature is presented in the following section under the relevant topics – knowledge management, knowledge sharing, knowledge re-use, and knowledge management system. An attempt has been made to examine the main contribution and conclusions of previous research studies pertaining to the proposed field of investigation. And finally presents a brief summary of the literature review at the end and highlights the research gap.

1. **O'Leary, D. E. (1998)** argued that knowledge bases and especially best practices knowledge bases are a necessary prerequisite for successful km applications: "… the existence of best-practices knowledge bases signals the extent of development of a km system: less developed km systems generally do not have best-practices databases; more developed systems do". Based on a study of km practices in consulting firms he distinguishes between different kinds of knowledge bases and then describes the different issues that have to be taken into account when developing a knowledge base given the difficulty of the task.

2. **Lyytinen and Robey (1999)** observed the learning failure in the software industry. Not only do many companies fail to learn and improve from previous experience, in time they have also learned to expect to fail. Over time many companies have come to expect and accept poor performance while creating organizational myths that perpetuates short term optimization. Lyytinen suggest using knowledge management as a way to increase organizational intelligence in order to overcome these problems.

3. **Christopher Brewster, Fabio Ciravegna and Yorick Wilks (1999)** in their study "Knowledge Acquisition for Knowledge Management: Position Paper" examined that Knowledge is only of value when it can be used effectively and efficiently. The management of knowledge is a key element in extracting its value. In this position paper outlined how we are addressing the issue of automating the Knowledge Acquisition process in order to reduce both required time and cost of KA, and subjectivity in the resulting ontology. Overall we believe, this will make knowledge management not only more acceptable in a commercial environment but also contribute to the overall productivity of the economy.
4. **Rodney McAdam (2000)** in his study **"**Knowledge Management as a Catalyst for Innovation within Organizations: A Qualitative Study" identified that suitable model for

linking knowledge management with innovation and were derived based on the principle that knowledge leading to innovation is socially constructed as well as scientific in nature. This opens up the possibility of organizations embodying new knowledge and innovation within the culture of the organization from a wide range of new sources. Furthermore, these sources of innovation can come from without the organization (boundary spanning). The dissemination of constructed and embodied knowledge was found to be essential if organizations are to spread an innovative culture throughout all their environments usually geographically.

5. **Varun Grover and Thomas H. Davenport (2001)** in their work identified, Knowledge and its management involve effort on many fronts to be successful. Whether framed in terms of a process and its context or in terms of market efficiency and effectiveness, knowledge management offers fertile avenues for research. This special issue provides one small step in this regard. It is important to note however that the research agenda should be closely tied to practical issues in knowledge management. A healthy tension between knowledge and action is the key to organizational success.

6. **Nikolaos Nana (2001)** in his paper **"**Literature Review: Information Filtering for Knowledge Management" reviewed that investigated the role information filtering technology can play in the development of knowledge management systems. The theoretical foundations of knowledge management revealed that information is an important resource for the creation of new knowledge. And also argued that when the individual working on a knowledge intensive task is provided with relevant enough information then the extra insights that this information provides support him in his decision process and thus his further actions. The result of this "informed" action is the creation of new knowledge.

7. **Maryam Alavi and Dorothy E. Leidner (2001)** in their paper titled, "knowledge management and knowledge management systems: conceptual foundations and research issue" identified the large global firms in hyper competitive environments, information technology will be inter laced with organizational knowledge management strategies and processes. This is based on the observation that, in these firms, KM processes span time and geographic distance. This, combined with the need for very short cycle times for product/service development and innovation, necessitates reliance on information and

communication technologies. The role of IT in organizational knowledge management ought to receive considerable scholarly attention and become a focal point of inquiry. It is hope that the ideas, discussion, and research issues set forth will stimulate interest and future work in the knowledge management area by IS researchers.

8. **Mathiassen et al. (2001)** argued that software process improvement efforts depend on the implicit, individual knowledge of practitioners in an organization. To change software developers practices, the organization should improve the practitioners' existing knowledge (both theoretical and practical) of its software practices. In other words, knowledge about the new processes should be made available on different organizational levels. A major challenge for software process improvement initiatives is hence to create strategies and mechanisms for managing knowledge about software development. Insights from the field of knowledge management are therefore potentially useful in software process improvement efforts to facilitate the creation, modification, and sharing of software processes in an organization.

9. **DoritNevo (2002)** in his work identified that, KMS (knowledge management system) indicates the problem areas that should be resolved in order for KMS to support more effective KM and In addition organizations in selecting and designing KMS that best fit their knowledge needs. And meta knowledge can be applied in the design of knowledge management systems and enable more effective management of organizational memory.

10. **David J. Skyrme (2002)** in his paper on **"**Knowledge Management: Approaches and Policies", outlined the general approaches and techniques used in large organizations. However, research indicates that many of these are unsuitable or need adaptation for small to medium-sized enterprises. KM within SMEs (small and medium entrepreneurs) is still embryonic, and further research and collation of knowledge is required to develop this understanding and to derive generally applicable good practice guidelines. The evidence is that SMEs do benefit from looking at the development of their business through a 'knowledge lens', and ways should be found to encourage this perspective. In this paper observed that 'access', while necessary (e.g. in provision of knowledge through intermediaries as described above) is insufficient. The wider challenge for SMEs is one of absorption (are they ready to receive and act on this knowledge?) and of conversion (knowledge innovation – the conversion of ideas into commercially viable products and

services). And identified that there may be regulatory issues in specific areas that affect SMEs, such as inter-operability standards, intellectual capital reporting, intellectual property rights and regulation of knowledge e-markets.

11. **Ulrike Schultze and Dorothy E. Leidner (2002)** in their study **"**studying knowledge management in information systems research: discourses and theoretical assumptions" observed that tendencies to adopt an optimistic view of the role of knowledge in organizations and the role of information systems in enabling knowledge management. The voices of the dissenters are few; however, they are provocative.

12. **DezsoSzakaly (2002)** in his work "knowledge management strategies" points out that recognizable, institutionalized knowledge management models by reviewing the basic problems of knowledge management. It shows the basic features, the focuses of examination, the effects of each tendency. Than the author gives models and a typological system to develop the knowledge management strategy.

13. **TorgeirDingsoyr (2002)** in his thesis "Knowledge Management in Medium-Sized Software Consulting Companies - An Investigation of Intranet-based Knowledge Management Tools for Knowledge Cartography and Knowledge Repositories for Learning Software Organisations", concluded that the use of knowledge management tools varies both between developers, project managers and managers, and after the personal preferences employees have. And also observed the findings, Software organisations should acknowledge organisational issues in deploying knowledge management initiatives in companies, and also acknowledge that employees have different working styles that need different types of tool support. They describe the field of learning software organisations should focus more on tailoring knowledge management tools to users than pursuing technological advancements, like working with active knowledge management tools. There is a large potential in getting existing tools into wider and more effective use.

14. **Judy Matthews (2003**) in his paper "Knowledge Management and Innovation: How are they related?" explained that research on innovation, both specifically from research and development contexts and from research on innovative firms, with small and medium sized enterprises and large and international firms. The importance of innovation for

success at the firm and national level has been demonstrated. The essential contributions from knowledge practices and their critical role in innovative firms has been identified. And also concludes with some ways in which the activities seen as central to innovation in firms encapsulate knowledge management practices.

15. **Edwards (2003)** in their book, "Managing Software Engineering Knowledge" motivates the need for knowledge management in software engineering. He identifies six principal challenges, three categories of solutions, and two overall strategies that can be employed. The three types of solutions are technological, people and process-solutions.

16. **Shailesh Kumar and Sanjeev Gupta (2004)** from their study on "Knowledge Management in Multinational Organizations: A Literature Review" observed that knowledge management systems can be thought of as systems composed of people, tools and technologies, and knowledge that interact to provide knowledge to people in the organization that need it.

17. **Partha Bhattacharya and Pravin Kumar Chaudhury (2004)** in their work Knowledge Management and its Utilisation : an Overview" points out that the tacit knowledge represents the attempts of the organizations to maximize the capabilities of their people by capturing their expertise and turning it into a corporate asset, KM decision should be based on the business objectives of the organization, KM for corporate is mainly for getting competitive edge over rival companies and KM in India is at a nascent stage of development with very few organizations are taking it seriously.

18. **ImandraGalandere-Zile and ViktorijaVinogradova (2005)** in their work**, "**Where is the Border between an Information System and a Knowledge Management System?" identified that Knowledge management is a systematic and articulated approach to managing knowledge related processes. It represents an opportunity to derive additional benefits from the organisation's existing investment in computers, databases and networks by integrating them to support knowledge management. Knowledge management has been implemented by companies that put organisational knowledge at the centre of consideration.
19. **Manish KumarSourenPauland Suresh Tadisina (2005)** in their study, "Knowledge Management Practices In Indian Software Development Companies: Findings from An

Exploratory Study" focused on eight leading Indian software companies and gather insight into their KM practices. And also found that Indian software companies are aware of the capabilities of KMS and are using it to improve productivity, reduce defects, facilitate reuse of software components and share lessons learnt in execution of projects. The primary focus of KM in these companies is on distribution of knowledge through intranet websites. There is considerable room for enhancements in the current KMS and consequent tangible benefits from the advanced KMS. Authors suggested a technical and social infrastructure that will help enhance KM capability of software development companies in India.

20. **Bhojaraju G. (2005)** in his paper, "Knowledge Management: Why Do We Need It for Corporates" observed that Knowledge Management is an organisational approach that is not easily implemented. On one hand, knowledge-sharing activities depend on the voluntary participation of employees. Therefore, management should be sensitive to the knowledge activities that are already going on within the company and seek mean to support them. On the other hand, management needs to implement some organisational change in order to change the corporate culture. Employees can have all sorts of reasons for not joining in and employees who see benefit in KM have a hard time changing the corporate culture accordingly. Some objectives of workers can seem quite practical like, 'I don't have time for that, I need to meet my deadline'. Others could even be outright selfish, as they shield off their knowledge from potential competitors. A knowledge sharing culture can only found futile ground if top management supports it, showing benefits, incentives and rewards to those who do. Therefore KM cannot be just another project on the side; it requires structural change in the policy of the company.

21. **Brian Detlor, Umar Ruhi, OfirTurel, Pierrette Bergeron, Chun Wei Choo, Lorna Heaton and Scott Paquette (2006)** in their study "The Effect of Knowledge Management Context on Knowledge Management Practices: an Empirical Investigation" points out that organizational and personal information behaviors are influenced by the corporate wide knowledge management environment comprising the practices, policies and processes institutionalized and the technologies implemented for KM initiatives. Subsequently, personal information behaviors are also influenced by organizational information behaviors suggesting that an individual's own behavior towards information

and knowledge sharing is influenced by his/her perceptions of others commitments and tendencies towards knowledge sharing.

22. **Peter Feher and Andras Gabor (2006)** authors paper "The Role of Knowledge Management Supporters in Software Development Companies" stated that KM strategies have impact both on KM processes and on supporters. KM strategies connect organizational strategy with KM practice. i). the use of technological solutions is widely accepted. They have a role not only in the case of codification strategies, but in these cases they have a vital role. ii). Knowledge-oriented organizational culture and support of communication has critical role for success in the area of organizational solutions. The structure of organizations has not changed dramatically; therefore the evaluation of the role of organizational structures is partly missing. Incentives do not have a critical role, especially using cash-incentives. Lack of management support is more of a barrier and definitely not a success factor. iii). Performance evaluations and matrix are present during KM practices, but the scope is slightly different, and rarely KM specific Matrix often measure the performance of a department, or a project.

23. **Chih-Hung Tsai, Ching-Liang Chang, and Lieh Chen (2006)** authors "A Case Study of Knowledge Management Implementation for Information Consulting Company" examine the structure of knowledge management system and its implementation benefits proposed in this paper are surely helpful for each enterprise. Some points are reminded in the following:
    1. The forming and establishing of any knowledge management project is much dependent on top management support.
    2. The organization status and staff's physiological conditions must be considered for implementing knowledge management. Other management technologies like ERP and SCM are more concentrated in matching up with the flow within the organization with less considering the physiological factor.
    3. To form a learning-type organization is highly dependent on the sharing for each member to exchange his/her knowledge and experience with others. As a consequence, the knowledge management implementation leads to increase competitiveness.
24. **Jun Xu, Gita Sankaran, Shankar Sankaran and Di Clarke (2008**) in his study, "Knowledge Management in Twenty-first Century: Literature Review and Future

Research Directions", suggest that there is a need for more research on the evaluation of knowledge management performance. The tacit dimension of knowledge has made measuring performance of knowledge based assets and investments harder as a result of the difficulties in quantifying these and the lack of a common standard for measuring the intangible benefits arising from managing tacit knowledge. However, it is important to undertake research in this area, since an organization's knowledge management adoption decisions very much rely on the expected performance of knowledge management. Such research can help obtain management buy-in for knowledge management programs, and support for managing organizational knowledge assets in a more systematic and effective way.

25. **Nikhil Mehta (2008)** in his paper "Successful Knowledge Management Implementation In Global Software Companies" found that the fallowing assumptions;

a. The KM Strategic Intent can be either ''Defined'' or ''Undefined''. Undefined strategic intent connotes that the company has not identified its ''strategic gaps''. Thus the firms cannot develop subsequent capabilities. Such firms fail to create KM-enabled value. If the intent is defined, but the firms haven't yet developed subsequent capabilities, they will still not create KM-enabled value.
b. With the strategic intent defined and the organizational facilitators in place, firms may, at best, create low levels of KM-enabled value, as the individual facilitators are still absent.
c. With the introduction of individual facilitators, value-creation will improve, but will remain at moderate levels, as the value-assessment measures are still evolving and the firms are unable to effectively assess whether the strategic knowledge gaps have been filled.
d. Once the value-assessment measures have matured, firms are able to gather valuable feedback, and use it to modify the three capabilities.

Managers can use a blank worksheet and fill the coloured cells with appropriate level of KM activities as they carry them out. At any point of time, the worksheet will thus display the status of firms' KM program. This will improve firms' ability to diagnose and isolate probable reasons, if any, for low levels of KM value creation. In addition, the worksheet will also ensure that all managers involved in the KM program share the same perspective. Authors also conclude that Successful KM programs at global software companies are influenced by various strategic, procedural, technological and cultural issues. Firms develop

three specific capabilities to address these issues. The capabilities, when developed simultaneously, help software firms create KM-enabled value.

26. **William R. King (2009)** in his paper titled "Knowledge Management and Organizational Learning" observed that Knowledge management is a set of relatively new organizational activities that are aimed at improving knowledge, knowledge-related practices, organizational behaviours and decisions and organizational performance. KM focuses on knowledge processes – knowledge creation, acquisition, refinement, storage, transfer, sharing and utilization. These processes support organizational processes involving innovation, individual learning, collective learning and collaborative decision making. The "intermediate outcomes" of KM are improved organizational behaviours, decisions, products, services, processes and relationships that enable the organization to improve its overall performance.

27. **Danny P. Wallace, Connie Van Fleet and Lacey J. Downs (2010**) in their study "The Use of Research Methodologies in the Knowledge Management Literature" designed that explore the nature of the research methodologies employed in the knowledge management literature. Two prominent conclusions can be drawn from this analysis. First, empirical research using established social sciences research methods is clearly not the dominant focus for articles in refereed journals in knowledge management. Of the 630 articles determined to be relevant to knowledge management, only 34.8 per cent used typical social sciences research methods. Furthermore, 27.8 per cent did not use any identifiable research methodology, implying that the standard for scholarship in refereed knowledge management journals is not directly based on research. Second, the knowledge management literature appears to employ an alternative to or surrogate for traditional social sciences research methods that emphasizes detailed analyses of prior literature as a substitute for historical methods and visual modelling as a substitute for quantitative and qualitative methods.

28. **Bc. Pavel Jelínek (2010)** in his thesis **"**Knowledge Management in Software Development" aims to help its readers to choose and set up a suitable infrastructure for supporting knowledge management in small and medium sized software organizations. After reading the thesis, one should be able to spot why to employ knowledge management, how to operate it, and what its enablers are. The research has shown that

comparing the knowledge management approaches and factors is not nearly as straight forward as one might think since there are no hard metrics to measure its outcomes. Thus, a theoretical background which enables at least comparing the knowledge management assets has been introduced at the beginning of this thesis. Once the comparison has been possible, the reasons why one should take knowledge management into consideration have been presented.

29. **KashifAkram, SulemanHafeez Siddiqui, Muhammad AtifNawaz, Tauqir Ahmad Ghauri and AmjadKhawar Hayat Cheema (2011)** in their study, "Role of Knowledge Management to Bring Innovation: An Integrated Approach" develop an integrated model which includes several factors that plays vital role to bring innovation. ICT (Information, Communication and Technology) factors help the organization to find out and manage the organizational knowledge which increases the organizational knowledge assets and capabilities. Knowledge success factors are vital in diffusing knowledge from individuals to the entire organization which strengthen the organizational knowledge culture. In order to pace up the innovation process, organizations must implement the innovation determinants which are actually the cause of innovation.

30. **Santwana Chaudhuri (2011)** in his study "Knowledge Management in Indian IT Industries" observed that People also should have a shared understanding of what a knowledge driven company is all about and its impact. Thus knowledge management, if initiated and cultivated with all strategic intent and supported by the top decision makers is going to bring positive change in the organization-its people, process and practices.

31. **ShuibBasri and Rory V. O'Connor (2011)** in their work "A Study of Knowledge Management Process Practices in Very Small Software Companies" stated that collectively agreed by the respondents that the KM initiatives in VSEs are done very informally, individually and specifically. In term of knowledge process and strategy issues, the result showed that all respondents claimed that they have a clear KM strategy in the organization. However the analysis showed that this process are done informally and is not organized. In addition the result show that even though the KM was done informally either in communication, documentation, learning and sharing in VSEs, 90 per cent of the respondents believed that this environment have led them to mitigate the knowledge loss problem in their organization. Moreover the results also indicated that in

overall the size of the company given an impact to all the process that have discussed above. Overall although the results showed the high informal and indirect culture in VSE in most of their development activities, the results also indicate that VSEs commitment towards KM is very high and positive. Meanwhile, with regards the future study, we plan to wider our research participation through identifying more VSEs which located in Ireland in order to understand the issue more detail and to identified the constraints that prevent them from managing their organizational knowledge systematically. In additional, since the majority of software development companies in other countries in general and Malaysia in specific which are falls under the small and medium size category .

32. **Abdel Nasser H. Zaied, Gawaher Soliman Hussein and Mohamed M. Hassan (2012)** in their paper, "the role of knowledge management in enhancing organizational performance" investigated the role of knowledge management in enhancing the organizational performance in some Egyptian organizations and addressed its relationship with performance improvement. Also, it measured the level of knowledge management capabilities and addressed the relationship between knowledge management capabilities and organizational performance measures. Results of correlation analysis show significant relationship between knowledge management elements and performance improvement measures, which in turn represented the quality of organizational knowledge that was utilized in a wide variety of decision-makings in the firm. Thus, if the quality of organizational knowledge is good, it can be conclude that management performance improves significantly.

33. **Javed Iqbal and Yassir Mahmood (2012)** in their study "Reviewing Knowledge Management Literature" observed that many theoretical implications and opened a new gateway to future research. As the trends indicates that recently momentum took place in KM publication. Hence it suggest that any KM publication will be preferred if it focuses on the lacking areas in KM field like:

    1) KM studies from less developed countries
    2) From industry
    3) Qualitative and Quantitative research approaches having empirical data
    4) Taking individuals/group as unit of analysis and
    5) Focusing KM processes.

34. **B. Gopalkrishna, Lewlyn L. R. Rodrigues, P. K. Poornima, and Shivanshu Manchanda (2012)** authors paper "Knowledge Management in Software Companies-An Appraisal" designed that evaluate the state of knowledge management implementation in two software organizations and assess the awareness levels of knowledge management as well as degree of acceptance in these organizations. Knowledge that was shared in the organizations was opined to be of high quality, readily applicable and accurate. It was also well structured and updated regularly. Most respondents feel that KMS significantly satisfies their search for knowledge and is user friendly and almost all respondents feel that KMS is vital for their company's success. However, organizations have to address certain areas regarding the implemented knowledge management system. A considerable number of employees are not familiar with the KMS and use it mainly to search for general information and not to participate in competence networks to develop shared knowledge assets. They feel KMS has added to their responsibilities at the workplace and they do not perceive the benefits of KMS in terms of improved innovation and market shares.

35. **M. S. Josephine and V. Jeyabalaraja (2012)** in their paper "Expert System and Knowledge Management for Software Developer in Software Companies" present the knowledge management process for software developer in the development environment. The SDO (software developer optimizer) is composed of knowledge entries that are facts and rules. It asks questions about projects and its data parameters. The paper consists to develop the software developer optimizer support the developer to get the expert system facts, SOA and software engineering paradigm.

36. **Siva Dorairaj, James Noble and Petra Malik (2012)** in their technical report "Knowledge Management in Distributed Agile Software Development" studied the distributed software development from the specific perspective of Agile practitioners. Several key practices of knowledge management in distributed software development emerged from our analysis. Authors describe these practices through the four processes of knowledge management: knowledge generation, knowledge codification, knowledge transfer and knowledge application. Agile methods promotes knowledge sharing through coordination, communication and collaboration between team members. Knowledge required for Agile software development is very context-dependent and often it is difficult

to transfer the context to different projects even within the same organization. Therefore, critically analysing the knowledge before reuse is crucial for successful implementation of knowledge management systems. Knowledge generation involves creation and acquisition of knowledge through several practices: project inception, customer collaboration, formal training sessions, com- munities of practice and self-learning. Knowledge codification translates tacit knowledge to explicit knowledge that is stored as Wiki articles, design documents and presentation materials in knowledge management systems. They found that transfer of knowledge between distributed team members occurs, using suitable tools, during daily Scrum, inception workshops, visits to different sites, pair- programming, rotation and discussion sessions. The shared and stored knowledge is integrated into an individual's existing knowledge to create new knowledge that is used in similar project-context software development and problem solving activities, and to gain competitive advantage in future sprints or projects.

37. **Antonio Leal-Rodriguez1, Antonio Leal-Millan, Jose Luis Roldan-Salgueiro and Jaime Ortega-Gutierrez (2013)** in their paper, "Knowledge Management and the Effectiveness of Innovation Outcomes: The Role of Cultural Barriers" points out that (i) the antecedents of the knowledge base and (ii) the contingent relationship between the knowledge base and innovation outcomes by introducing the cultural barriers as a moderator. Specifically, knowledge management strategies as antecedents of the knowledge base, view the innovation outcomes as a consequence of the knowledge base and investigate the moderating role of the culture.

38. **Yingxin Zhao, Yanqiu Lu and Xiangyang Wang (2013)** "Organizational unlearning and organizational relearning: a dynamic process of knowledge management", in this study, the authors examine the relationships among organisational unlearning, organisational relearning and dynamic knowledge management and propose a frame on dynamic knowledge management from the perspectives of organisational unlearning and organisational relearning. According to this frame, the authors separately conduct research on the evolutions of organisational unlearning and organisational relearning and the interactions between them. The results show that organisational unlearning and organisational relearning are the indispensable factors to the dynamic knowledge management. Organisational unlearning positively affects the dynamic knowledge management by discarding the outdated and useless knowledge, while organizational

relearning has a positive influence on the dynamic knowledge management by acquiring the new knowledge. In short, organisational unlearning and organisational relearning have synergies on the dynamic knowledge management. Practitioners aiming to achieve dynamic knowledge management would:

a. Identify outdated and useless knowledge and prepare for organizational learning/unlearning/relearning. Practitioners should conduct self-examination of individual behaviours, existing knowledge, beliefs and routines, which can help them, identify outdated and useless knowledge.
b. Weaken the resistance to organizational unlearning and successfully implement organizational unlearning. In the circles of organizational learning/ unlearning/ relearning, organizations often encounter great resistance and pressure when organizational unlearning is carried out. How to effectively implement organizational unlearning is crucial for practitioners. The authors suggest that they should adopt appreciative inquiry (Srithika and Bhattacharyya, 2009), which can reduce distrust and conflict and help the organizations overcome inertia (Sekerka *et al,* 2006).
c. Effectively manage the evolutions of organizational unlearning/relearning and facilitate the transfer from individual unlearning/relearning to group unlearning/relearning. Practitioners can manage the evolutions of organizational unlearning/relearning by the two ways: mandatory or inductive. The former is that top managers manage the evolutions by the mandatory way, while the latter is that top managers inspirit individuals and groups to voluntarily manage the evolutions.
d. Promote common values, missions and future vision. In order to achieve dynamic knowledge management, practitioners should provide better context and help individuals in sharing perceptions and gaining collective understanding through meetings, conferences, and similar other forums (Srithika and Bhattacharyya, 2009).

39. Vibha Thakur & Swarnangini Sinha (2013) in their work "Knowledge Management in an Indian Perspective" observed that Management should look upon the key areas where there is huge data loss for the company.

- To Compete on Price.
- Tacit knowledge need to be tapped for large extent.
- The 85 per cent organizations have information about knowledge management other 15% organizations are not acquainted with knowledge management.

- However, 65 per cent organizations are aware of the benefits of knowledge management but other 35 per cent organizations are not fully aware of its benefits.
- Overall, 76 per cent organizations have implemented Knowledge Management strategy but other 24 per cent organizations have not yet implemented any Knowledge Management strategy.
- There are only 15 per cent organizations who have implemented Knowledge Management strategy at all levels.
- Those organizations who have not implemented Knowledge Management strategy yet, only 67 per cent of them are interested to implement Knowledge Management strategy in their place.

40. **Mine AfacanFındıki, UgurYozgat and YasinRofcanin (2015)** in their article, **"**Examining Organizational Innovation and Knowledge Management Capacity the Central Role of Strategic Human Resources Practices" pointed that strategic human resources practices were associated with organizational innovation and knowledge management capacity. More specifically, compensation and training were found to be significant predictors of organizational innovation. As for the knowledge management capacity of companies, performance appraisal and compensation had significant explanatory power.

41. **S.C.L. Koh and A. Gunasekaran (2015)** in their study, "A knowledge management approach for Managing Uncertainty in Manufacturing", concluded that knowledge management approach for managing uncertainty in manufacturing enterprises was proposed and developed. The knowledge management approach consists of a knowledge-enriched manufacturing system, which comprises of a knowledge-based planning module and an execution platform. A reference architecture and intelligent agent were created to store tacit knowledge and create explicit knowledge respectively. The results were verified using simulation experiments with a real case study data. It can be concluded that the knowledge management approach is useful for managing uncertainty and have significantly reduced finished product and part tardy deliveries. Since, the tacit knowledge of buffering and dampening techniques were found to be effective, hence the buffering and dampening techniques could be added to the reference architecture to form further tacit knowledge for a more generic application.

Summary of the Review of Literature and Research Gap

The proposed research on the topic "**Knowledge Management Policies and Practices – A Study With Reference To Computer Software And Services Companies In Karnataka",** the topic for the study is selected based on the review of 33 research studies conducted abroad (80%) and 8 research studies related to computer software and services companies in India (20%). The majority of the research articles reviewed are related to knowledge management, knowledge management systems and knowledge sharing.

Majority of the studies conducted with reference to knowledge management in manufacturing organizations, small scale industries and software development companies. The review of literature gives clear idea of various issues related to software and services companies and clearly indicates that there are only few studies conducted with reference to knowledge management policies and practices in software and services companies. Therefore, it could be stated at this stage that the proposed filed of investigation is an under-researched area.

4. STATEMENT OF THE RESEARCH PROBLEM AND RESEARCH QUESTIONS

Success in business is believed to be dependent more and more on company's knowledge management (KM) abilities. Such companies as Nokia, Microsoft, Canon, or Toyota have achieved their market positions thanks to their capability to innovate continuously, adapt to the needs of the market, implement emerging technologies and quickly develop new high-quality products. In such companies, knowledge is recognized and well managed asset, which is incorporated in all activities of the corporation.

Knowledge Management is key for the success of any type of organization in the liberalised and globalized era as the IT companies are emerging in large numbers with more competitions. The survival and competiveness depend upon the asset the company creates in the form of 'knowledge'. Companies must be more innovative and dynamic to cope with external environment. The companies have to invest in such human capital which creates innovative and flexible knowledge assets for which the IT companies have to develop knowledge management policies and practices. Such policies and practices differ from one company to another in the same line.

India's IT service industry presents the case of an internationally competitive, high-tech industry from a developing economy. This industry has both climbed up the value chain and grown in technological sophistication and now spans a broad array of emerging services and technologies. India has competitive advantages over the other developing countries for IT services outsourced from developed nations. National Association of Software & Service Companies (NASSCOM) is an umbrella organization for IT services companies and IT-enabled services companies in India. The combined revenue of NASSCOM member companies constitutes almost 95 per cent of the revenue of the IT software and services industry in India. NASSCOM asserts that its member companies are responsible for more than 90 per cent export revenues. Over 300 Indian computer software and services have already obtained ISO 9000 or CMM level 2 certification. It is because of this high quality of Indian IT sector that the majority of multinational companies in IT have their software development or research centre in India. Further, Karnataka is known as Silicon Valley of India. It is described as IT capital of the country. Both national and multinational software industries of all size are located in Karnataka. No scholar has undertaken a comprehensive and authoritative research study in respect of knowledge management. In this study, an attempt is made to evaluate the broad trends and status of knowledge management in computer software and services companies and the logic behind formulating various knowledge management policies and practices.

Hence, there are lot of issues related to Knowledge Management which inspire the researcher to take up the proposed study titled, "KNOWLEDGE MANAGEMENT POLICIES AND PRACTICES – A STUDY WITH REFERENCE TO COMPUTER SOFTWARE AND SERVICES COMPANIES IN KARNATAKA".

The research study intends to answer the following research questions:

Research Question (RQ) 1: What are the principal dimensions and features of Knowledge Management policies and practices in computer software and services companies in Karnataka?

Research Question (RQ) 2: What are the organizational characteristics likely to influence the level of sophistication of Knowledge Management policies and practices?

Research Question (RQ) 3: What are the key drivers and broad trends and status of knowledge management?

Research Question (RQ) 4: What are the key determinants of innovative Knowledge Management policies and practices?

5. OBJECTIVES OF THE PROPOSED STUDY

1. To highlight the principal dimensions and features knowledge management policies and practices.
2. To describe the organizational characteristics of sound knowledge management policies and practices.
3. To discuss the major causes/drivers, facilitators and inhibitors of sound knowledge management policies and practices.
4. To measure and assess the key determinants of innovative knowledge management policies and practices.
5. To raise major organizational and managerial implications of sound knowledge management policies and practices based on the findings of the research.

6. HYPOTHESES

Hypothesis 1 Organizational characteristics tend to influence the level of sophistication of Knowledge Management policies and practices in computer software and services industry.

Hypothesis 2 Key drivers and broad trends and status of Knowledge Management policies and practices tend to vary across the organizational characteristics.

Hypothesis 3 Knowledge Management Strategies tend to vary across different organizational characteristics.

Hypothesis 4 Key determinants of innovative Knowledge Management policies and practices tend to vary across the organizational characteristics.

7. RESEARCH METHODOLOGY

The present study is descriptive and diagnostic in nature. The study will be confined itself to an in-depth analysis of specific "Knowledge Management Policies and Practices – A Study With Reference To Computer Software and Services Companies in Karnataka". The present study is based on primary data in particular and secondary data in general.

a) Primary source of data

The primary data will be collected from questionnaire, interview and discussion with the executive who are the respondents.

b) Secondary source of data

Secondary data will be collected from referring books, journals, magazines, research papers, articles and websites.

c) Sample techniques and sample size

The directory of NASSCOM consisting of 1803 members will be considers the sample frame the proposed research study. A comprehensive pretested questionnaire will be mailed to CKO/Human Resource Managers of those companies listed in NASSCOM directories. Later also will be made to increase the response rate by writing reminders to non-respondents as all-off measures. Appropriate statistical techniques and tools will be used for analyzing the interpreting the survey data.

A multiple case study research will also be carried out in selected software and services companies in Karnataka by properly following the case study proto cal.

8. SCOPE AND LIMITATIONS OF THE STUDY

The study covers the role and relevance of KM policies and practices, various determinants of KM policies and practices, trends and status of KM policies and practices, in different computer software & service companies in Karnataka state.

The research study will be confined only to computer software and service companies in Karnataka state covering private, public and MNCs. The findings, inferences and conclusions cannot be generalized so as to make them applicable to other industrial organizations in India or abroad due to cross sectoral and cross cultural differences.

9. CHAPTER CLASSIFICATION

The proposed study entitled **"Knowledge Management Policies and Practices – A Study with Reference to Computer Software and Services Companies in Karnataka"** will be presented in seven chapters as indicated below:

CHAPTER ONE - "INTRODUCTION" will present an overview of the subject matter, conceptual framework, statement of the research problem and research questions, objectives and hypothesis. The sources of data, data collection instrument, sampling techniques, scope and limitations and layout of the thesis will also be included in this chapter.

CHAPTER TWO - "THEORETICAL FRAMEWORK" outlines a thumb-nail sketch of theoretical foundation of knowledge management policies and practices. In this chapter brief description of evolution of knowledge management though various models of knowledge management and different theories constitutes the theoretical foundation of knowledge management policies and practices.

CHAPTER THREE - "REVIEW OF LITERATURE" will devote to a comprehensive and critical review of earlier research studies pertaining to the current field of investigation.

CHAPTER FOUR - PROFILE OF CASE STUDY ORGANISATIONS will presents the basic characteristics, learning context of respondent case study organizations. The contextual setting describes in this chapter provides a clear foundations for discussing the impact of knowledge management policies and practices in the next chapter with a proper perspectives.

CHAPTER FIVE - KNOWLEDGE MANAGEMENT POLICIES AND PRACTICES: TRENDS AND STATUS IN KARNATAKA analyses and reports the knowledge management and knowledge management systems influence of stakeholders on knowledge management activities, key drivers, facilitators, inhibitors and processes of knowledge management as perceived and reported by the respondent computer software and services companies in Karnataka.

CHAPTER SIX - "DETERMINANTS OF KNOWLEDGE MANAGEMENT POLICIES AND PRACTICES" will focus on the major factors influencing the sophistication of knowledge management policies and practices in different organizations.

CHAPTER SEVEN - "SUMMARY AND CONCLUSION" will provide summary of the major results and discussions along with the direction for future research.

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